



Claire McCaskill

Missouri State Auditor

---

December 2005

STATEWIDE

General Obligation  
Bond Sales Practices  
Follow-Up



---

**Taxpayers could avoid unnecessary interest costs if school districts and political subdivisions issued general obligation bonds on a competitive basis and used independent financial advisors**

This audit is a follow-up of our 2001 report titled *Audit of General Obligations Bond Sales Practices* (Report no. 2001-04). We determined whether recommendations made to the State Board of Education and other state entities had been implemented. In addition, we determined the (1) extent to which the negotiated method of sale has been used compared to the competitive method, (2) financial impact of the use of negotiated sales, and (3) reasons why competitive sales have not been used more often by Missouri public entities.

Prior recommendations not implemented	In January 2001, the State Auditor's Office made several recommendations to reduce unnecessary interest costs associated with negotiated bond sales. However, none of our recommendations have been implemented. (See page 4)
Issuers continue to favor negotiated sales of bonds	Political subdivisions have continued to favor the use of negotiated sales from 1993 through mid-2005. During that timeframe, 87 percent of Missouri issues represented negotiated sales compared to a national average of 46 percent. (See page 4)
School districts and other public entities could reduce interest costs	School districts and other public entities issued approximately \$4.1 billion in general obligation bonds from September 2000 through May 2005. School districts issued approximately \$3.5 billion, or 84 percent, of that amount. Analysis of \$1.2 billion in bonds issued in a 12-month period disclosed cost savings could have been achieved if bond issues had been sold competitively. For example, estimated savings on competitive sales ranged from \$21,000 to \$125,000 on bonds analyzed. (See pages 4 and 9)
Competitive sales of general obligation bonds not required by state law	Missouri law does not require public school districts and municipalities to conduct competitive general obligation bond sales. However, six of eight surrounding states have laws which restrict the method of sale for general obligation bonds sold at the local level. A legislative revision to state law is needed to address the trend of issuing negotiated general obligation bonds in the state. (See page 10)
Some issuers not always well informed	Some issuers used questionable reasons in choosing negotiated sales. In addition, officials contacted believed they achieved low interest rates on negotiated sales because underwriters offered rates below the national bond index. However, due to Missouri's high credit rating, the majority of general obligation bonds issued in the state achieve rates below the national index. The analysis provided by technical advisors concluded competitively sold general obligation issues achieved lower rates than issues sold through negotiation. We also found public school officials have not always been aware of existing guidance, or the availability independent financial advisors. (See page 11)



**Claire McCaskill**  
Missouri State Auditor

# YELLOW SHEET

---

Issuers have not obtained  
independent financial advice

Interviews with ten public school and two other public entity officials disclosed they had not obtained independent financial advice for bonds issued during our 12-month test period. Officials told us they use underwriters because of the service received and existing business relationships with underwriters. However, having an underwriter serve as a financial advisor, as well as underwrite a bond issue, may create a conflict of interest for underwriters according to the Government Financial Officers Association. Seven of ten school administrators contacted knew the potential conflict of interest existed, but "trusted" underwriters had provided them with a "good deal." (See page 13)

---

Issuers lacked adequate  
information without  
independent financial advisors

Without independent financial advisors, issuers have not always been well informed about bond issue options. We found several instances in which underwriters had not provided adequate information to issuing officials regarding the cost-effectiveness of bond features such as bond insurance, or of splitting a single bond issue into multiple issues. However, this type of information is normally provided by independent financial advisors. In addition, we found the majority of officials contacted simply accepted underwriter proposals presented to them with no negotiation because they had not been adequately prepared to evaluate the proposal and did not use an independent financial advisor. (See page 15)

**All reports are available on our website: [auditor.mo.gov](http://auditor.mo.gov)**

---

# Contents

---

<b>State Auditor's Letter</b>		2
<b>Chapter 1</b>		3
<b>Introduction</b>	Status of Prior Recommendations	4
	Issuers Have Favored Negotiated Sales	4
	Scope and Methodology	5
<b>Chapter 2</b>		9
<b>Opportunities Exist to</b>	Negotiated Sales Resulted in Higher Costs	9
<b>Reduce Interest Costs on</b>	Competitive Bond Sales Not Always Required by State Law	10
<b>General Obligation Bond</b>	Some Issuers Not Always Completely Informed	11
<b>Sales</b>	Issuers Have Not Obtained Independent Financial Advice	13
	Without Independent Financial Advisors, Issuers Lacked Adequate Information	15
	Conclusions	16
	Recommendations	17
	Agency Comments	17
<b>Appendix I</b>	Test Population	18
<b>Appendix II</b>	Technical Advisor Biographies	22
<b>Appendix III</b>	Detailed Bond Analysis Methodology	23
<b>Appendix IV</b>	Public Entities Reviewed by SAO	27
<b>Appendix V</b>	GFOA Method of Sale Matrix	28
<b>Figures and Tables</b>	Figure 1.1: Percentage of Bond Issues by Method of Sale	5
	Figure 1.2: Percentage of Bond Dollars by Type of Issuer	5
	Table I.1: Test Population: Bonds Issued June 1, 2004 through May 31, 2005	18
	Table IV.1: Site Visits by SAO Auditors	27
	Table V.1: Competitive vs. Negotiated Sales: Summary of Conditions Favoring Each Method of Sale	28

---

## Abbreviations

GFOA	Government Financial Officers Association
MoASBO	Missouri Association of School Business Officials
RSMo	Missouri Revised Statutes
SAO	State Auditor's Office
SD	School District
TIC	True Interest Cost



**CLAIRE McCASKILL**  
**Missouri State Auditor**

Honorable Matt Blunt, Governor  
and  
Members of the General Assembly  
and  
Dr. D. Kent King, Commissioner  
Department of Elementary and Secondary Education  
Jefferson City, MO 65102

Missouri public entities issued approximately \$4.1 billion in general obligation bonds from September 2000 through mid-2005. Because of the importance of ensuring public entities incur the lowest possible costs associated with the issuance of bonds, we followed-up on recommendations in our 2001 report titled *Audit of General Obligation Bond Sales Practices* (Report no. 2001-04), and related issues. This audit focused on the issuance of general obligation bonds sold by school districts, cities, counties and other public entities under Section 108.170, RSMo. Specific objectives included following-up on prior recommendations made, and determining the (1) extent to which the negotiated method of sale has been used compared to the competitive method, (2) financial impact of the use of negotiated sales, and (3) reasons why competitive sales have not been used more often by Missouri public entities.

We found none of the recommendations from our prior report have been implemented and Missouri's public entities have continued to favor negotiated sales of general obligation bonds. Analysis of \$1.2 billion of bonds issued during the 12-month period ending May 31, 2005, disclosed interest cost savings of \$21,000 to \$125,000 per issue could have been achieved if bond issues had been sold competitively. Collectively, the interest cost savings estimated by technical advisors is consistent with findings presented in our prior audit. Public school administrators and other public officials have continued to use negotiated bond sales and incurred higher interest costs, in part, because state law has not required public school districts and municipalities to conduct competitive sales of general obligation bonds at the local level. Public entities issuing bonds also have not been well informed and have not obtained independent financial advice. Instead, these officials have relied on underwriters to provide financial services. However, having an underwriter serve in the dual capacity of financial advisor and underwriter for a bond issue may create a conflict of interest for underwriters according to the Government Financial Officers Association. Without independent financial advisors, public school administrators, and other public officials, have been placed at a disadvantage because they lack adequate information on bond issuance options and the capability to adequately evaluate bond proposals. Additional regulation and guidance are necessary to ensure more general obligation bonds are issued using competition and issuers are obtaining independent financial advice.

We conducted our audit in accordance with applicable standards contained in *Government Auditing Standards*, issued by the Comptroller General of the United States, and included such procedures as we considered necessary in the circumstances. This report was prepared under the direction of John Blattel and key contributors included Robert Spence, Robert Showers, and Jennifer Nunez.

Claire McCaskill  
State Auditor

---

# Introduction

---

General obligation bonds are used by public entities such as school districts, cities, counties, and the state, to finance government improvements which benefit the community as a whole. In accordance with Section 164.121, Missouri Revised Statute (RSMo), voter approval is required prior to any political subdivision entering into long-term debt agreements. General obligation bonds are secured by the full faith and credit of the taxing authority of the issuer. The issuer pledges to levy the necessary taxes available in order to repay the debt. Due to the strength of this security pledge, general obligation bonds are readily accepted in the municipal marketplace. The interest income earned by an investor in general obligation bonds is typically tax-exempt. For this reason, tax-exempt bonds carry the lowest rates of interest in the securities market, according to the Government Financial Officers Association (GFOA).

Current Missouri law<sup>1</sup> allows public entities to sell general obligation bonds through competitive or negotiated sale methods. This law requires negotiated bonds to be sold at no less than 95 percent of face value and have an interest rate less than 10 percent. In a competitive bond sale, an issuer requests bids from underwriting firms to purchase its bonds and sells the bonds to the underwriter offering the lowest true interest cost (TIC)<sup>2</sup> bid. In a negotiated sale an underwriter is selected in advance and the issuer then negotiates the purchase price for which the bonds are to be sold.

GFOA literature<sup>3</sup> states the advantages of competitive sales include assurance bonds are sold at the lowest interest rate on a given day, outcomes are defensible for public officials, and an open, fair process is promoted. The primary disadvantage of a competitive sale is a reduction in the issuer's flexibility to respond to fluctuating market conditions. GFOA literature also states the advantages of a negotiated sale include a heightened attention given to the issue by the underwriter as well as additional flexibility to be able to respond to rapidly changing market conditions. The literature states a significant disadvantage of negotiated sales is the issuers often do not have adequate information to negotiate effectively.

---

<sup>1</sup> Section 108.170, RSMo.

<sup>2</sup> TIC is the "best practice" measure recommended for measuring the interest cost of municipal bond issuance. It is the interest rate that sets the present value of interest and principal payments equal to the proceeds from the issue. Bill Simonsen and Mark Robbins, "Measuring Municipal Borrowing Costs: How Missing Cost Information Biases Interest Rate Calculations" *Public Budget & Finance*, Spring 2002.

<sup>3</sup> "An Elected Official's Guide to Debt Issuance," J.B. Kurish and Patricia Tighe, GFOA, 2005.

---

## Status of Prior Recommendations

In January 2001 the State Auditor's Office (SAO) issued a report<sup>4</sup> concerning general obligation bond sales practices in the state of Missouri. We concluded Missouri political subdivisions incurred an estimated \$83 million in excess interest costs on bonds issued from 1997 through 2000 because issuers relied on the negotiated method of sale. We recommended (1) the State Board of Education encourage school districts to pursue fair and open competition in bond sales, (2) the state provide bond financing and debt structuring assistance to local governments, if requested, (3) the state provide a centralized bond authority under the supervision of the Board of Fund Commissioners for political subdivisions to seek advice and counsel regarding method of sale before the issuance of general obligation bonds, and (4) the General Assembly consider revising Section 108.170, RSMo to require independent financial advisors and competitively selected underwriters when issuing bonds.

As of August 2005, none of the above recommendations had been implemented. According to a Department of Elementary and Secondary Education official, the State Board of Education responded to our prior report by inviting a representative from the SAO to speak to a group of school administrators. In addition, Missouri Health and Educational Facilities Authority and Department of Elementary and Secondary Education officials also stated they have not been asked to provide any bond financing or debt structuring advice to schools or local governments and have, therefore, not provided any. An Office of Administration official, stated his agency has taken no action regarding the prior recommendations. In addition, the General Assembly made no changes to Section 108.170, RSMo.

---

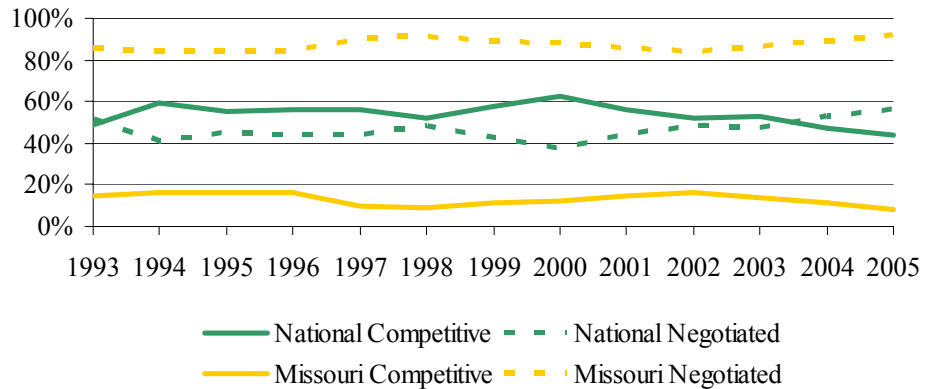
## Issuers Have Favored Negotiated Sales

Political subdivisions in Missouri favored the use of negotiated sales from 1993 through mid-2005. Figure 1.1 shows the percentage of bonds issued by method of sale nationally and for Missouri issues from 1993 through part of 2005. During this time period an average of 87 percent of Missouri issues have been negotiated sales, compared to a national average of 46 percent. In 2004 and 2005, the use of negotiated sales increased, representing 89 percent and 92 percent of issues respectively, in Missouri.

---

<sup>4</sup> *Audit of General Obligation Bond Sales Practices*, SAO, January 29, 2001 (Report No. 2001-04).

**Figure 1.1: Percentage of Bond Issues by Method of Sale<sup>1</sup>**



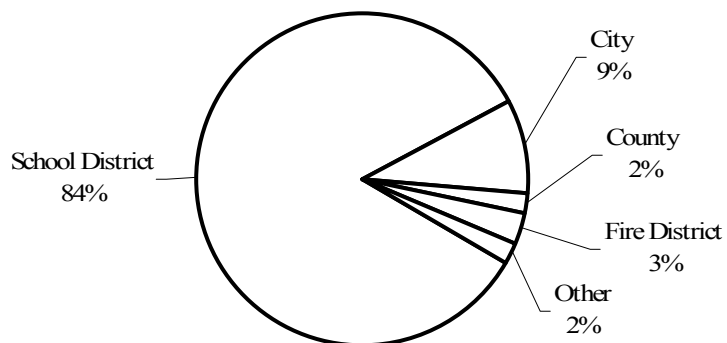
<sup>1</sup> Data is presented by calendar year. Missouri 2005 data is through May 2005. National data is through June 2005.

Source: Thompson Financial municipal bond data and SAO bond registration data.

School districts issued majority of general obligation bonds

Public entities issued \$4.1 billion in general obligation bonds statewide from September 2000 through May 2005. As shown in Figure 1.2, school districts issued \$3.5 billion, or approximately 84 percent, of that amount.

**Figure 1.2: Percentage of Bond Dollars by Type of Issuer**



Source: Thompson Financial municipal bond data and SAO bond registration data.

## Scope and Methodology

In preparing for this review, we reviewed published literature on the topic of municipal bond sales, and specifically on competitive versus negotiated sales. Much of the research reviewed is cited in the body of this report.

Political subdivisions use other debt financing tools, such as revenue bonds, tax increment financing bonds, lease-purchase agreements, and special assessment bonds. This review deals exclusively with general obligation bonds.

---

To determine a universe of general obligation bonds, we obtained the SAO municipal bond database for all bonds issued subsequent to our prior audit, which included September 2000 through May 2005. Our database of bonds for that timeframe included 850 bonds, totaling \$4.8 billion. We eliminated nine bonds issued by the State of Missouri from the database, which reduced the universe of bonds to 841, totaling \$4.1 billion. To obtain a more manageable test population, we selected bonds issued during the 12 months ending May 31, 2005. To ensure an analysis of the test population would produce meaningful results, we removed 23 bonds which contained features or structures affecting the comparability of those bonds. The 23 bonds included all neighborhood improvement district, capital appreciation, certificate of participation and Qualified Zone Academy bonds. We also removed six privately placed bonds.

To ensure our test population included all bonds relevant to this review, we obtained a list of Missouri municipal bond sales from Bloomberg financial services and compared it to the bonds in the SAO database to identify any unregistered bonds. We identified three bonds not registered<sup>5</sup> with the SAO which we added to the test population. The final test population included 161 bonds totaling \$1.2 billion. We used this test population to perform an in-depth analysis. We consider the test population representative of the universe of bonds because the test population exhibited similar issue characteristics, including issuer types and proportion of competitive and negotiated sales, as the \$4.1 billion universe. See Appendix I for list of bonds in the test population.

To ensure all relevant costs of issuance had been considered in our analysis, we obtained and included financial advisor cost information on all competitively sold issues in our test population, and adjusted the TIC rates of those issues accordingly.

To determine if any potential interest cost differences existed between the competitive and negotiated bond sales in our test population, we obtained the help of technical advisors. Dr. Bill Simonsen and Dr. Mark Robbins of the University of Connecticut Department of Public Policy provided analytical and technical advice. The technical advisors have published recent research articles on the topic of public bond sales and public finance. For additional information on technical advisors, see Appendix II.

---

<sup>5</sup> State statutes do not require bonds issued by subdivisions with populations exceeding 60,000 to register their bonds with the SAO.

---

Our technical advisors analyzed the test population using an ordinary least squares regression analysis. This procedure produces coefficients that represent the estimated influence a series of variables have on a dependent variable. The dependent variable in this analysis is the TIC rate of the bond issues in our test population. Many additional factors, referred to as independent variables, might influence borrowing costs and are included in the analysis. The primary independent variable, for the purposes of our review, is the method of sale (competitive or negotiated). However, other variables also impact the TIC and have been included in the analysis as control variables. They include the length of maturity, the issue amount, the amount of experience that the issuer has had with prior sales, market interest rates at the time of the bond sale, the credit rating of the jurisdiction, and whether issuers purchased bond insurance to protect bond holders from default.

SAO technical advisors tested additional methodological concerns and addressed those concerns in accordance with prevailing standards of empirical public policy analysis. They determined analysis results to be statistically significant. For a more technical discussion of the methodology used by technical advisors, see Appendix III.

To further validate the methodology used by technical advisors, we contacted the Director of the University of Missouri's Truman School of Public Affairs and requested an evaluation of analyzes performed by the technical advisors. The Director recommended two professors that reviewed the methodology used. The professors endorsed the soundness of the regression analysis methodology and the reasonableness of the results. See Appendix III for additional information on the methodology review.

We met with representatives of five leading bond underwriters in the state to advise them of our findings and to discuss the methodology used by the technical advisors. We also provided them an opportunity to contact the technical advisors with questions on the methodology used. However, the underwriters chose not to do so. The underwriters generally did not agree with our findings, but did not provide specific information as to why they disagreed.

To identify potential issues faced by issuers of public debt and to understand what factors contribute to the choices they make, we met with representatives of 15 public entities which included 12 school districts and 3 cities. We selected locations from our test population of bonds to ensure the entity had been recently involved in a bond issue. See Appendix IV for listing of locations visited. We also had discussions with representatives of the Missouri Association of School Administrators and the Missouri

---

Association of School Business Officials (MoASBO) for their views on public debt issues relevant to school district issuers.

To document best practices in the issuance of public debt, we had discussions with representatives of GFOA, as well as representatives of the National Association of Independent Public Financial Advisors. We also had discussions with five financial advisors to more fully understand the role of a financial advisor in the competitive process.

We reviewed state laws of Missouri's eight surrounding states to determine how state laws concerning general obligation bond issues compared to Missouri's. We specifically reviewed whether other states' laws restricted the method of sale of general obligation bonds. We also reviewed other Missouri laws relevant to public debt issuance.

To verify the accuracy of the bond data we randomly selected 10 bonds from our test population and traced the information in the database back to the bond transcript. No discrepancies were observed.

We requested comments on a draft of our report from the Commissioner, Department of Elementary and Secondary Education, and those comments are included in Chapter 2. We performed our work between April 2005 and August 2005.

# Opportunities Exist to Reduce Interest Costs on General Obligation Bond Sales

School districts and political subdivisions have incurred unnecessary interest costs when issuing general obligation debt because public entities have continued to use negotiated sales in lieu of competitive sales when issuing public debt. This situation has occurred because state law has not required the use of a competitive process when issuing general obligation bonds at the local level, and because public entity officials have not always been well informed or obtained independent financial advice prior to issuing bonds. Having an underwriter serve in the dual capacity of financial advisor and underwriter for a bond issue may create a conflict of interest. The lack of knowledge and independent financial advice have resulted in school administrators and other public officials not always being adequately informed of bond issuance options, or being able to adequately evaluate bond proposals.

## Negotiated Sales Resulted in Higher Costs

Analysis of a test population of 161 bonds, totaling \$1.2 billion, issued during the 12-month period ending May 31, 2005, disclosed cost savings could have been achieved if bond issues had been sold competitively. Regression analysis performed by the technical advisors disclosed issuers incurred higher interest rates<sup>6</sup> on negotiated sales than on competitive sales. On average, this analysis showed competitively sold bonds achieved interest cost savings. This savings ranged from \$21,000 to \$125,000<sup>7</sup> per issue, depending on the size of the issue. Collectively, the interest cost savings estimated by the technical advisors is consistent with findings presented in our prior audit.

## Issuers heavily favor negotiated sales

Issuers of general obligation debt in Missouri have favored the use of negotiated sales. For example, 87 percent of Missouri general obligation bond sales from September 2000 through mid-May 2005, have been issued using the negotiated method of sale. Nationally, negotiated sales made up 48 percent of all general obligation bonds over that same timeframe.

Available guidance endorses the use of competition in the bond issuance process. According to GFOA guidance, a competitive sale would be "very effective" when a standard debt instrument (such as a general obligation bond) is used, and the issuer has a credit rating of "A" or better. Approximately 90 percent of our test population met these two criteria. (See Appendix V for GFOA's complete list of conditions favoring each method of sale.) The use of competition in these circumstances has also been

<sup>6</sup> Interest rates were measured using the true interest cost rate of each issue.

<sup>7</sup> Amounts represent present value savings.

---

endorsed by five independent financial advisors<sup>8</sup> contacted by SAO. MoASBO guidance is also consistent with GFOA guidance and further states the AA+ credit rating provided to school districts enrolled in the Missouri Health and Educational Facilities Authority's program should allow for an increased number of school district bonds to be sold through competition.

MoASBO guidance further states that due to the competition that exists among underwriters, competitively sold bond issues typically receive five to 10 bid responses. This guidance is consistent with our review of the test population which showed the 17 bonds sold competitively received an average of 9.2 bids. The analysis performed by the technical advisors determined that as the number of bids received on an issue increases, the interest rate achieved on that issue decreases. According to the technical advisors, this result is consistent with economic theory which suggests increased competition should result in lower costs.

---

## Competitive Bond Sales Not Always Required by State Law

Missouri law has not required public school districts and municipalities to conduct competitive general obligation bond sales. However, of Missouri's eight surrounding states, six have laws which restrict the method of sale for general obligation bonds sold at the local level. Iowa, Kentucky, Oklahoma, and Tennessee specifically require all general obligation bonds be sold competitively, while Arkansas and Kansas require bonds meeting certain criteria be competitively bid. The laws of these states also include stipulations on how the issues must be bid.

According to a GFOA official, the most effective means of changing the existing culture in Missouri's municipal bond market is to institute legislative change restricting the method of sale. These comments are consistent with data from Missouri's surrounding states. According to Bloomberg municipal bond data, 72 percent of the bonds issued in states which restrict the method of sale had been sold competitively from 2001 through 2004. Comparatively, only 27 percent of the bonds issued in the other two surrounding states and Missouri, which do not restrict the method of sale, had been issued by competitive sale.

---

## Other Missouri statutes require competitive sales

We identified seven Missouri statutes which require bonds issued for joint fire departments, state buildings, urban library districts, state parks, and water conservancy districts, to be competitively sold. In addition, Section 360.106(11), RSMo requires that in the event the Missouri Health and

---

<sup>8</sup> We define the term "independent financial advisor" to include any financial advisor who is independent of the bond transaction and not involved with the underwriting of the bonds.

---

## Some Issuers Not Always Completely Informed

Educational Facilities Authority sells a bond issue, all professional services, including underwriters, financial advisors, and bond counsel, be competitively selected.

Discussions with public school administrators disclosed questionable reasons for choosing negotiated sales. This situation occurred because administrators have not always been completely informed about the bond market. Discussions with nine public school administrators disclosed the following examples of reasons given supporting the use of negotiated bond sales.

- A negotiated sale gives the issuer more flexibility to time the pricing of an issue to allow the underwriter to get the best rates.

According to GFOA guidance, while a negotiated sale does provide additional flexibility, the flexibility it provides may be limited due to the uncertainty of interest rates and due to the fact that the issuer is locked into issuing the debt in a timely manner to fund a capital project. In addition, the use of electronic and internet bidding has also increased the flexibility of timing on competitive sales, according to the Bond Market Association.<sup>9</sup>

- The issuing entity is not a frequent issuer of debt and/or the issue size is too small to attract bidders in a competitive sale.

According to GFOA guidance, and based on discussions with independent financial advisors, an issue's bond rating and debt instrument type outweighs the size of the issue and the issuer's experience in the market. Our test population of bonds includes bond issues which are small (less than \$1 million) and issuers with minimal market experience who received nine or more bids on competitively sold issues. According to the Bond Market Association,<sup>10</sup> the use of electronic and internet bidding may lead to an increased number of bids for competitively sold issues.

- For public relations reasons, the entity wanted to be able to place a portion of the bonds with local investors, which can only be done using a negotiated sale.

---

<sup>9</sup> Public Finance Issuer Advisory: Mechanical Aspects of Municipal Bond Sale Practices, May 26, 2004, Bond Market Association.

<sup>10</sup> Public Finance Issuer Advisory: Mechanical Aspects of Municipal Bond Sale Practices, May 26, 2004, Bond Market Association.

	<p>While it is true that when an issuer requires local placement, it is better to use a negotiated sale, according to one financial advisor, however, the value of local placement is questionable. This financial advisor stated the public entity would need to consider whether placing a portion of the bonds with local investors was worth paying the higher interest rates when a negotiated sale is used.</p>
<p>Issuers believed "good" interest rates achieved on negotiated sales</p>	<p>Issuers contacted also expressed confidence they had received a "good" interest rate because underwriters offered rates below the national market index.<sup>11</sup> Based on bond issue data, the majority of general obligation bonds issued in Missouri have rates below the national index. This result is caused by the strong credit rating of the state and the high credit rating attached to these bonds, according to an independent financial advisor. Technical advisors concluded the majority of issues in our test population had rates below the national index rate. The technical advisors' analysis also concluded competitively sold issues on average had rates further below the national index than issues sold through negotiation.</p> <p>According to GFOA guidance, and five financial advisors we contacted, a financial advisor independent of the bond issue would have the means and the fiduciary responsibility to evaluate any proposal to ensure it is in the best interest of the public entity.</p>
<p>Some issuers not always aware of guidance</p>	<p>Organizations such as GFOA, MoASBO, and the Missouri Association of School Administrators have provided bond issuance guidance to potential bond issuers. However, the Department of Elementary and Secondary Education has not provided adequate guidance on bond financing (see Chapter 1 for information on prior recommendations). Several school administrators contacted claimed to be unaware of any guidance on the subject, stating that they were not members of these organizations or that such guidance had not been communicated to them. One district official had been aware of guidance, but had chosen to ignore it because he felt comfortable using underwriters for negotiated sales.</p> <p>Members of the Missouri Association of School Administrators finance committee consult with superintendents of public schools on financial matters. The Executive Director and Assistant Executive Director of that organization, and five members of the association's finance committee, told us there is a lack of financial advisors in the state, which makes acquiring the services of one difficult. However, according to the National</p>

<sup>11</sup> The national index rate represents the national average of rates being obtained for a certain type of bond on a given day, or an average of the rates for a given week.

---

Association of Independent Public Financial Advisors website, there are 10 Certified Independent Public Financial Advisor firms in Missouri and its surrounding states.<sup>12</sup> In addition, issuers can also contract with an underwriting firm to serve as an independent financial advisor, without a conflict of interest if the underwriter is not involved in the sale of bonds. (See following discussion on conflict.)

---

## Issuers Have Not Obtained Independent Financial Advice

Interviews with officials from ten public schools and two other public entities issuing negotiated bond sales during the 12-month test period, disclosed those officials did not obtain independent financial advice. Instead, officials have relied on underwriters to provide financial services, such as reviewing funding sources and debt structures.

Issuing officials contacted told us they use underwriters because of the high level of financial services received from the underwriters and because of relationships already built with underwriters, which makes negotiated sales easier and more convenient, especially for officials that have minimal support staff with financial expertise.

---

## Conflict of Interest May Exist When Underwriters Serve as Both Financial Advisor and Underwriter

Having an underwriter serve as financial advisor, as well as underwrite the bond issue, may create a conflict of interest, according to GFOA guidance. The primary function of the underwriter is to purchase the bonds from the issuer and then resell them to investors. GFOA guidance states "Issuers must understand that underwriters are working simultaneously with two different clients when underwriting a bond issue—the issuer and investors. When it comes to pricing bonds, the incentives for those two are at direct opposition." "In order to minimize conflicts of interest and promote objectivity, governmental issuers should avoid selecting a firm to serve both as financial advisor and as underwriter of a bond issue."<sup>13</sup> Due to the potential conflict of interest that may exist when an underwriter provides financial advisory services, MoASBO also recommends the use of an independent financial advisor. GFOA guidance also suggests a financial advisor be selected prior to the selection of a method of sale.

Four financial advisors contacted told us the financial services provided by an underwriter in a negotiated sale included all bond issue planning as well as bond election consulting. According to issuers who have issued both competitive and negotiated sales, a competitive sale is no more time consuming or inconvenient than a negotiated sale.

---

<sup>12</sup> See [www.naipfa.com](http://www.naipfa.com) for listing of independent financial advisor firms.

<sup>13</sup> "An Elected Official's Guide to Debt Issuance," J.B. Kurish and Patricia Tighe, GFOA, 2005.

---

	<p>Research literature<sup>14</sup> states "small local governments with limited staff and financial resources are at a distinct disadvantage in the bond marketplace," which translates into higher borrowing costs. The same literature suggests an enhancement in management capacity, such as the use of an independent financial advisor, would reduce borrowing costs.</p> <p>GFOA and MoASBO guidance recommends financial advisors be selected competitively through a request for proposal process that includes cost factors as well as subjective factors such as experience and qualifications.</p>
Some school administrators contacted knew the potential for a conflict of interest existed	<p>Two of ten public school administrators interviewed that had issued negotiated bonds told us they did not see any conflict of interest, while seven knew a potential conflict existed, but trusted their underwriter provided them with great service and a good deal. One administrator did not realize a potential conflict existed because he did not realize financial advice and underwriting services could be separated.</p>
Underwriters not selected competitively when used	<p>Discussions with 12 issuing officials disclosed officials had not selected underwriters on a competitive basis. Eight of the 12 issuers using negotiated sales, did not request proposals from other underwriters, and none of the 12 evaluated proposals from underwriters in a formal manner. Instead, officials have tended to select underwriters based on past business relationships, without the benefit of a competitive selection process. Our review of bond data showed 78 percent of frequent issuers,<sup>15</sup> that used only negotiated sales, used the same underwriter for all issues. An interview with one school superintendent disclosed the same underwriter had been used for all of that district's bond issues for 21 years without considering a single proposal from another underwriter.</p> <p>A financial advisor's duties include helping in the underwriter selection process. GFOA and MoASBO guidance states that even in the event a negotiated method of sale is selected, competition should be included in the underwriter selection process. The guidance recommends the use of a request for proposal process which ensures multiple proposals are considered before the selection of an underwriter is made. According to the guidance, the selection process should include cost factors in addition to subjective factors such as responsiveness and qualifications.</p>

---

<sup>14</sup> Robbins, Simonsen, and Helgerson. 2001. "The influence of jurisdiction size and sale type on municipal bond interest rates: An empirical analysis," *Public Administration Review*. (November/December). Vol. 61, No. 6. pp. 709-717.

<sup>15</sup> A frequent issuer is defined as an issuer who had three or more bond issues since September 2000.

---

## Without Independent Financial Advisors, Issuers Lacked Adequate Information

Without independent financial advisors, issuers have not always been well informed of bond issue options. For example, discussions with 12 issuing officials, that used underwriters for negotiated sales, disclosed two instances where officials not familiar with the bond issue process stated they had not been told by their underwriters a competitive sale had been an option. In other instances, although issuers knew a competitive sale could be used, underwriters proceeded with a negotiated sale without informing issuers they could have served as an independent financial advisor on a competitive issue.

According to GFOA guidance, part of the role of an independent financial advisor is to ensure the issuer's goals and interests are represented and protected. This role includes determining which method of sale would be appropriate for the issue and ensuring the structure and timing of the issue are in the best interests of the issuer.

We also found several instances in which underwriters had not provided adequate or complete information to issuing officials regarding the cost-effectiveness of bond features such as bond insurance, or of splitting a single bond issue into multiple issues. However, this type of information is normally provided by independent financial advisors. MoASBO guidance recommends the issuing entity consider the cost-benefit of such bond features before decisions are made.

Discussions with 12 issuing officials, who had used underwriters for negotiated sales, also disclosed the majority of the officials simply accepted underwriter proposals presented to them with no negotiation. This situation occurred because officials did not (1) use a financial advisor, (2) have adequate knowledge of bond markets, or (3) possess adequate technical knowledge to evaluate proposals. It also occurred because they trusted underwriters would give them a "good deal."

According to GFOA literature,<sup>16</sup> the lack of adequate knowledge by the issuer does not allow the issuer to negotiate effectively and is one of the significant weaknesses of using a negotiated sale without a financial advisor. Without representation of an independent financial advisor, the burden is on the issuer to determine if the rates proposed are fair and competitive with the market. Without a good understanding of market conditions and how the bonds will sell in the marketplace, the issuer has no assurance the rates proposed by the underwriter are favorable. For example,

---

<sup>16</sup> "An Elected Official's Guide to Debt Issuance," J.B. Kurish and Patricia Tighe, GFOA, 2005.

---

several superintendents and business officials expressed confidence they had received a good price on negotiated bonds based on "comparable sale" information<sup>17</sup> provided by the underwriter. None of the issuers contacted had been given information by underwriters to allow bond issues to be adequately compared to "comparable sales," such as the TIC of issues and "comparable sales." We also found examples where "comparable" sales had been used that had not been comparable to the issue being evaluated. For example, an underwriter for one municipality, issuing approximately \$1 million in bonds, provided the municipality interest rates for a \$200 million Florida school district issue to use for comparison purposes. According to discussions with financial advisors as well as underwriters, comparing two bond issues is very difficult due to maturity lengths, issue amounts, credit rating differences, features and other factors.

---

## Conclusions

Public entity issuers incurred unnecessary interest costs on general obligation bonds due to continued reliance on negotiated sales. This situation has occurred, in part, because state law has not required public school districts and municipalities to use competitive bond sales. On the other hand, six of Missouri's surrounding states have required its use and legislative change has been effective in reducing the percentage of negotiated sales. While various Missouri statutes require the use of competitive sales in a variety of instances, the statute pertaining to school districts and municipalities does not contain this restriction. Legislation is needed to require school districts and other public entities to use independent financial advisors and use competitive sales of bonds when bond issues have a rating of "A" or higher.

In addition, the rationale for using negotiated sales by the majority of public school administrators contacted has not always been valid because administrators have not always been completely informed about the bond markets. In addition, they have not always been aware of bond issue guidance provided by organizations such as GFOA, MoASBO, and the Missouri Association of School Administrators. The Department of Elementary and Secondary Education has provided little guidance on bond issuance and financing. The department should be proactive in providing that information.

Issuers also did not seek the advice of independent financial advisors. Instead, they have continued to receive and rely on financial services

---

<sup>17</sup> A "comparable sale" is typically a bond priced at approximately the same timeframe as the bond being evaluated, with similar features, structure and rating. It is meant to be used to compare and evaluate the rates of the two bond issues.

---

obtained from underwriters of bonds who have a vested interest in using the negotiated sale method in issuing bonds. The underwriter may benefit financially if a negotiated method of sale is chosen. Having an underwriter serve as a financial advisor, as well as underwrite the bond issue, may create a conflict of interest. Some school administrators contacted knew a potential conflict of interest existed, but chose to use underwriters because underwriters provided "good deals." It is not in the best interest of taxpayers for public school administrators, or other public officials, to use underwriters if a potential conflict of interest exists. In addition, when underwriters have been used, they have not been selected competitively. When the services of an independent financial advisor or underwriter are needed, they should be selected competitively.

An independent financial advisor can provide information to the issuer concerning selling bonds competitively, obtaining favorable interest rates on negotiated bond sales, and the cost-benefit of other options such as insurance on bonds and the splitting of bond issues. This information will help ensure the issuer is selecting the appropriate method of sale. Independent financial advisors can also be beneficial because they have adequate technical knowledge and information of the markets to allow them to properly evaluate both negotiated and competitive proposals.

---

## Recommendations

We recommend the General Assembly revise Section 108.170, RSMo to require:

- 2.1 The use of a competitively selected financial advisor, who is independent of the bond sale, when issuing public debt.
- 2.2 Public entities to use the competitive method of sale for general obligation bond issues with a credit rating of "A" or higher.
- 2.3 The use of a competitively selected underwriter, when appropriate, for necessary negotiated sales.

We also recommend the State Board of Education direct the Department of Elementary and Secondary Education to:

- 2.4 Provide guidance to public school entities regarding the preferred use of competitive bond sales and the use of independent financial advisors.

---

## Agency Comments

Department of Elementary and Secondary Education Comments

*2.4 The department will take this recommendation under advisement.*

# Test Population

Table I.1 contains the test population used in the analysis performed by our technical advisors.

**Table I.1: Test Population: Bonds Issued June 1, 2004 through May 31, 2005**

No.	Bond Issued By	Bond Registration Number	Type of Sale	Amount of Issue	Date of Issue	True Interest Rate (Percent)
1	City of Kansas City	NA	Competitive	\$ 95,700,000	9/1/2004	4.317
2	St. Louis Public Schools	NA	Negotiated	44,115,000	11/23/2004	3.920
3	City of Springfield	NA	Competitive	3,950,000	2/1/2005	3.634
4	Taneyville R-II School District (SD)	24582	Negotiated	205,000	6/1/2004	4.187
5	Excelsior Springs 40 SD	24583	Negotiated	4,590,000	6/1/2004	4.677
6	Excelsior Springs 40 SD	24584	Negotiated	3,410,000	6/1/2004	5.384
7	Cameron R-I SD	24585	Negotiated	5,800,000	6/2/2004	4.679
8	City of St. Charles	24586	Competitive	2,240,000	6/1/2004	2.903
9	Grain Valley R-V SD	24587	Negotiated	4,750,000	5/15/2004	4.127
10	Smithville R-II SD	24588	Negotiated	7,815,000	6/1/2004	4.811
11	Wheaton R-III SD	24589	Negotiated	420,000	6/3/2004	4.169
12	Washington SD	24590	Negotiated	9,400,000	6/1/2004	4.609
13	New Bloomfield R-III SD	24591	Negotiated	1,200,000	6/2/2004	4.774
14	St. Charles Community College	24592	Competitive	23,000,000	6/1/2004	4.914
15	Parkway C-2 SD	24593	Competitive	45,000,000	6/10/2004	4.538
16	City of Lake Winnebago	24594	Negotiated	525,000	6/1/2004	4.379
17	Pierce City R-VI SD	24595	Negotiated	985,000	6/1/2004	3.731
18	Poplar Bluff R-I SD	24596	Negotiated	3,470,000	6/1/2004	4.386
19	Wentzville R-IV SD	24597	Competitive	25,000,000	6/1/2004	4.823
20	University City SD	24598	Negotiated	9,600,000	6/22/2004	4.683
21	Clever R-V	24599	Negotiated	1,900,000	6/1/2004	4.814
22	Lake Ozark Fire Protection District	24600	Negotiated	1,250,000	6/1/2004	3.868
23	Scott Co. Central SD	24601	Negotiated	1,900,000	6/24/2004	4.213
24	Northwest R-I SD	24602	Competitive	14,100,000	6/1/2004	4.620
25	Sullivan SD	24603	Negotiated	3,950,000	6/1/2004	4.892
26	Bolivar R-I SD	24604	Negotiated	3,900,000	6/1/2004	4.829
27	South Metropolitan Fire Protection District	24605	Negotiated	6,750,000	6/15/2004	4.676
28	Marionville R-IX SD	24606	Negotiated	720,000	6/15/2004	4.110
29	Winfield R-IV SD	24608	Negotiated	2,500,000	7/1/2004	4.708
30	Strafford R-VI SD	24609	Negotiated	6,000,000	7/1/2004	4.436
31	City of Black Jack	24610	Negotiated	4,500,000	7/8/2004	4.444
32	Republic R-III SD	24612	Negotiated	3,100,000	7/1/2004	4.412
33	Monarch Fire Protection District	24613	Competitive	4,300,000	7/1/2004	3.312
34	Willard R-II SD	24614	Negotiated	6,000,000	7/1/2004	4.482
35	Lee's Summit R-VII SD	24616	Negotiated	54,735,000	7/1/2004	4.162
36	Benton County R-II SD	24617	Negotiated	625,000	7/1/2004	3.312
37	Center SD No. 58	24618	Negotiated	7,590,000	8/1/2004	4.243
38	City of Lawson	24619	Negotiated	800,000	8/1/2004	4.605
39	Jefferson City SD	24620	Negotiated	4,325,000	8/1/2004	3.045
40	Francis Howell SD	24621	Negotiated	28,870,000	8/31/2004	4.069

## Appendix I Test Population

**Table I.1: Test Population: Bonds Issued June 1, 2004 through May 31, 2005**

No.	Bond Issued By	Bond Registration Number	Type of Sale	Amount of Issue	Date of Issue	True Interest Rate (Percent)
41	West St. Francois County R-IV SD	24623	Negotiated	1,500,000	8/26/2004	3.964
42	Central R-III SD	24624	Negotiated	1,300,000	8/26/2004	3.224
43	City of Blue Springs	24628	Negotiated	1,110,000	8/1/2004	4.150
44	Osage Beach Fire Protection District	24629	Negotiated	1,645,000	9/15/2004	3.069
45	City of Richmond	24630	Negotiated	3,200,000	9/15/2004	4.642
46	City of Pasadena Hills	24632	Negotiated	1,700,000	9/17/2004	4.705
47	West Overland EMS and Fire Protection District	24633	Negotiated	800,000	9/1/2004	3.651
48	Parkway C-2 SD	24634	Negotiated	12,066,968	9/28/2004	3.995
49	City of Greendale	24637	Negotiated	400,000	9/1/2004	5.114
50	Arcadia Valley R-II SD	24638	Negotiated	770,000	9/22/2004	3.427
51	Mid-County Fire Protection District	24639	Competitive	1,000,000	8/15/2004	4.400
52	Pattonville R-III SD	24640	Negotiated	24,780,000	9/28/2004	4.165
53	Riverview Gardens SD	24641	Negotiated	9,653,926	9/28/2004	3.599
54	Grandview R-II SD	24642	Negotiated	1,850,000	9/28/2004	3.871
55	Grandview R-II SD	24643	Negotiated	1,500,000	9/28/2004	4.299
56	Miller County R-III SD	24645	Negotiated	350,000	10/13/2004	4.622
57	Maplewood Richmond Heights SD	24647	Negotiated	7,100,000	10/15/2004	4.474
58	Fort Osage Fire Protection District	24649	Negotiated	2,500,000	11/1/2004	3.702
59	St. Joseph SD	24650	Negotiated	4,040,000	11/1/2004	3.879
60	Warren County R-III SD	24651	Negotiated	1,785,000	10/27/2004	3.620
61	Normandy SD	24652	Negotiated	10,000,000	11/4/2004	4.377
62	St. James R-I SD	24653	Negotiated	3,675,000	11/2/2004	3.716
63	Aurora R-VIII SD	24654	Negotiated	7,000,000	11/1/2004	4.536
64	Webb City R-VII SD	24655	Negotiated	4,250,000	11/1/2004	3.632
65	Lamar SD No. R-I	24656	Negotiated	3,605,000	11/1/2004	3.475
66	Moberly SD No. 81	24657	Negotiated	3,367,718	11/9/2004	3.849
67	Clayton SD	24658	Negotiated	12,563,640	11/16/2004	3.722
68	North Kansas City SD	24659	Negotiated	15,998,305	11/18/2004	4.148
69	Warrensburg R-VI SD	24660	Negotiated	5,830,000	12/1/2004	2.944
70	Farmington R-7 SD	24661	Negotiated	3,445,000	12/7/2004	2.808
71	Oak Grove R-VI SD	24662	Negotiated	1,525,000	12/7/2004	2.807
72	Oak Grove R-VI SD	24663	Negotiated	1,750,000	12/7/2004	2.750
73	Kirksville R-III SD	24664	Negotiated	4,050,000	12/1/2004	3.102
74	Lone Jack C-6 SD	24665	Negotiated	800,000	12/1/2004	3.033
75	Camdenton R-III SD	24666	Negotiated	9,330,000	12/1/2004	4.718
76	West Platte R-II SD	24667	Negotiated	2,775,000	12/1/2004	3.128
77	Lincoln County R-III SD	24668	Negotiated	6,700,000	12/8/2004	3.815
78	Pike County R-III SD	24669	Negotiated	1,215,000	12/15/2004	3.053
79	Normandy SD	24670	Negotiated	8,835,000	1/4/2005	3.619
80	Pattonsburg R-II SD	24671	Negotiated	725,000	12/15/2004	4.780
81	Platte County	24672	Negotiated	2,810,000	12/1/2004	3.387
82	Lockwood R-I SD	24673	Negotiated	2,175,000	12/15/2004	4.368
83	Center SD No. 58	24675	Negotiated	7,250,000	1/1/2005	4.436

## Appendix I Test Population

**Table I.1: Test Population: Bonds Issued June 1, 2004 through May 31, 2005**

No.	Bond Issued By	Bond Registration Number	Type of Sale	Amount of Issue	Date of Issue	True Interest Rate (Percent)
84	Lincoln County R-III SD	24676	Negotiated	7,050,000	1/5/2005	3.881
85	Ferguson R-II SD	24680	Competitive	10,000,000	12/22/2004	2.608
86	Central Cass County Fire Protection District	24681	Negotiated	1,030,000	12/15/2004	3.391
87	City of Raymore	24682	Negotiated	4,625,000	12/1/2004	3.553
88	Santa Fe R-X SD	24684	Negotiated	2,100,000	12/28/2004	4.266
89	Cape Girardeau SD No. 63	24687	Negotiated	2,270,000	12/30/2004	3.524
90	Fort Zumwalt SD	24688	Negotiated	16,375,000	1/5/2005	3.745
91	Pleasant Hill R-III SD	24689	Negotiated	9,800,000	1/6/2005	4.417
92	Crystal City 47 SD	24690	Negotiated	1,600,000	1/12/2005	3.501
93	Schuyler County R-I SD	24691	Negotiated	1,115,000	1/12/2005	3.573
94	Hazelwood SD	24692	Negotiated	70,000,000	1/18/2005	4.169
95	City of Des Peres	24695	Negotiated	14,555,000	1/31/2005	3.906
96	Scott City R-I SD	24696	Negotiated	1,850,000	2/1/2005	3.463
97	Hazelwood SD	24697	Negotiated	7,694,575	2/1/2005	3.770
98	LaPlata R-II SD	24698	Negotiated	1,575,000	2/23/2005	3.572
99	City of Chesterfield	24699	Negotiated	17,760,000	2/24/2005	3.735
100	Chaffee R-II SD	24700	Negotiated	572,000	2/15/2005	3.995
101	Camdenton R-III SD	24701	Negotiated	18,130,000	2/15/2005	4.295
102	Belton SD No. 124	24702	Negotiated	6,920,000	2/1/2005	3.631
103	Cape Girardeau SD No. 63	24703	Competitive	10,000,000	2/24/2005	3.703
104	Kearney R-I SD	24704	Negotiated	7,395,000	2/15/2005	3.467
105	City of Northwoods	24706	Negotiated	2,100,000	3/1/2005	3.903
106	Platte Co. R-III SD	24707	Negotiated	3,225,000	2/15/2005	3.339
107	Strafford R-VI SD	24709	Negotiated	1,860,000	3/2/2005	3.342
108	Crawford Co. R-I SD	24710	Negotiated	1,950,000	2/15/2005	3.540
109	Aurora R-VIII SD	24711	Negotiated	4,950,000	3/1/2005	3.602
110	Columbia SD	24712	Competitive	12,500,000	3/15/2005	3.728
111	Polo R-VII SD	24713	Negotiated	750,000	3/1/2005	4.560
112	Clark County R-I SD	24714	Negotiated	1,500,000	3/1/2005	4.144
113	The Junior College District of Mineral Area	24716	Negotiated	2,975,000	3/23/2005	3.400
114	Lone Jack C-6 SD	24717	Negotiated	2,000,000	3/15/2005	3.912
115	Mexico SD No. 59	24718	Competitive	850,000	3/31/2005	3.950
116	Clinton County R-III SD	24720	Negotiated	995,000	4/1/2005	3.150
117	Grain Valley R-V SD	24721	Negotiated	8,725,000	4/1/2005	3.964
118	Sni-Valley Fire Protection District	24722	Negotiated	750,000	4/4/2005	4.161
119	Blue Springs R-IV SD	24723	Negotiated	48,000,000	3/1/2005	4.408
120	Moniteau County R-VI SD	24724	Negotiated	3,065,000	4/5/2005	3.823
121	Pacific Fire Protection District	24725	Negotiated	1,290,000	4/1/2005	3.647
122	Moniteau County R-I SD	24726	Negotiated	4,775,000	4/5/2005	4.006
123	Crocker R-II SD	24727	Negotiated	1,295,000	4/5/2005	3.984
124	Republic R-III SD	24728	Negotiated	7,130,000	4/1/2005	4.082
125	St. Charles County Ambulance District	24729	Competitive	7,865,000	4/1/2005	4.213
126	City of Hazelwood	24730	Competitive	8,415,000	4/19/2005	4.112

## Appendix I Test Population

**Table I.1: Test Population: Bonds Issued June 1, 2004 through May 31, 2005**

No.	Bond Issued By	Bond Registration Number	Type of Sale	Amount of Issue	Date of Issue	True Interest Rate (Percent)
127	Orchard Farm R-V SD	24731	Negotiated	2,460,000	4/1/2005	3.630
128	Lebanon R-III SD	24732	Negotiated	9,285,000	4/26/2005	4.014
129	Francis Howell R-III SD	24733	Negotiated	23,370,000	4/26/2005	4.148
130	Spanish Lake Fire Protection District	24734	Negotiated	2,160,000	4/27/2005	3.826
131	Springfield R-12 SD	24735	Negotiated	29,280,000	5/1/2005	4.297
132	Greenfield R-IV SD	24737	Negotiated	520,000	5/3/2005	3.856
133	St. Joseph SD	24738	Negotiated	16,850,000	5/1/2005	4.071
134	City of O'Fallon	24740	Competitive	16,755,000	5/5/2005	4.002
135	La Plata R-II SD	24741	Negotiated	900,000	5/5/2005	4.101
136	Belton SD No. 124	24742	Negotiated	13,800,000	5/1/2005	4.366
137	Hannibal 60 SD	24744	Negotiated	13,015,000	5/1/2005	4.281
138	Kearney R-I SD	24745	Negotiated	9,400,000	4/15/2005	4.347
139	Sturgeon R-V SD	24746	Negotiated	2,300,000	5/11/2005	3.947
140	Sherwood Cass R-VIII SD	24747	Negotiated	3,165,000	5/1/2005	4.146
141	Cole County R-I SD	24748	Negotiated	3,025,000	5/18/2005	3.971
142	Moberly SD No. 81	24749	Negotiated	4,600,000	5/17/2005	4.248
143	Kirbyville R-VI SD	24750	Negotiated	600,000	5/17/2005	4.302
144	Midway R-I SD	24751	Negotiated	2,925,000	5/1/2005	4.411
145	Ritenour SD	24752	Negotiated	9,255,000	5/19/2005	3.761
146	Gasconade Co. R-II SD	24753	Negotiated	10,000,000	5/19/2005	4.385
147	Clearwater R-I SD	24754	Negotiated	1,500,000	5/24/2005	3.840
148	El Dorado Springs R-2 SD	24755	Negotiated	2,835,000	5/24/2005	3.974
149	Cooper County Fire Protection District	24756	Negotiated	1,870,000	5/24/2005	3.940
150	Sikeston R-6 SD	24757	Negotiated	4,530,000	5/24/2005	4.297
151	Kirksville R-III SD	24758	Negotiated	8,000,000	5/15/2005	3.892
152	Scott County R-IV SD	24759	Negotiated	3,500,000	5/15/2005	4.366
153	Hallsville R-IV SD	24760	Negotiated	2,950,000	5/25/2005	4.502
154	Cole County R-II SD	24761	Negotiated	900,000	5/24/2005	4.428
155	Cole County R-II SD	24762	Negotiated	1,600,000	5/24/2005	4.711
156	Hillsboro R-III SD	24763	Negotiated	3,750,000	5/25/2005	3.676
157	Putnam County R-I SD	24764	Negotiated	1,000,000	5/26/2005	3.537
158	Fulton SD No. 58	24765	Competitive	8,000,000	5/26/2005	4.067
159	Antonia Fire Protection District	24766	Negotiated	2,660,000	5/27/2005	3.654
160	North St. Francois County R-I SD	24767	Negotiated	2,800,000	5/26/2005	4.062
161	Dixon R-I SD	24775	Negotiated	2,100,000	5/15/2005	4.292
Total				\$ 1,208,757,132		

Source: SAO bond registration database and Bloomberg municipal bond data.

---

# Technical Advisor Biographies

---

Our technical advisors are involved in public finance research and education and have published numerous research articles on the topic. Much of their work has specifically addressed the cost differences that exist between competitive and negotiated sales.

**Bill Simonsen** is a Professor in the Department of Public Policy at the University of Connecticut and Director of its Master of Public Administration program, which is ranked in the top 10 in the nation by *U.S. News & World Report*. Simonsen obtained a B.A. in Geography from the State University of New York at Oswego, a Masters in City and Regional Planning from the Kennedy School of Government at Harvard University, and a Ph.D. in Public Administration from the Wagner School of Public Service at New York University. Simonsen's research and writing, much of it coauthored with Professor Mark Robbins, focuses on public sector financial management and policy. His research on municipal bonds covers such topics as interest rate calculations, use of competitive or negotiated sale types, bond structuring and sizing, understanding decision making in the bond sale process, debt policies, and emerging bond markets. Simonsen's work has appeared in journals such as *Public Administration Review*; *American Review of Public Administration*; *Public Budgeting and Finance*; *Municipal Finance Journal*; *Journal of Public Budgeting, Accounting and Financial Management*; *Urban Affairs Review*; *State and Local Government Review*; *Publius: The Journal of Federalism*, *Journal of Urban Affairs* and the *Social Science Journal*.

**Mark Robbins** is an Associate Professor in the University of Connecticut's Department of Public Policy where he conducts research and teaches in the area of public budgeting and finance. His research is focused in two areas; municipal bond issuance (from a government's perspective), and citizen preference revelation for taxation and spending. Before joining the faculty at the University of Connecticut, Robbins was on the faculty of the University of Georgia. Robbins received his Master's degree from the University of Oregon, and his Ph.D. from Syracuse University's Maxwell School. Robbins has made invited presentations on municipal bond issuance to the Government Finance Officer's Association, National Association of Independent Financial Advisors, the Georgia Municipal Association and the Virginia Resources Authority in addition to other state and local groups. His work has appeared in the *Municipal Finance Journal*, *Social Science Journal*, *Public Budgeting and Finance*, *Public Productivity and Management Review*, and *Public Administration Review*. His book with Bill Simonsen: *Citizen Participation in Resource Allocation* was released by Westview Press in 2000.

# Detailed Bond Analysis Methodology

The purpose of this appendix is to provide additional detail of the methodology used by our technical advisors (advisors). Our advisors prepared the detailed methodology and, therefore, it is somewhat technical in nature.

Using an ordinary least squares regression, our advisors concluded that, on average, competitive bond sales provided cost advantage over negotiated sales. Ordinary least squares regression is a standard linear regression procedure used to measure the estimated influence a series of variables has on a dependent variable. The dependent variable for the purposes of this analysis is the TIC. Many additional factors, referred to as independent variables, might influence borrowing costs and are thus included in the analysis. The primary independent variable, for the purposes of our review, is the method of sale (competitive or negotiated). However, other variables also impact the TIC and have been included in our advisor's analysis as control variables. They include the length of maturity, the issue amount, the amount of experience that the issuer has had with prior sales, market interest rates at the time of the bond sale, the bond market index, the credit rating of the jurisdiction, and whether issuers purchased bond insurance to protect bond holders from default.

Our advisors used several different models to determine if the sales method and number of bids impacted the TIC. They also used various models to show the consistency of the results, as well as to address various methodological concerns. The following sections explain the concerns and how advisors addressed them in the analyses.

## Selection Bias

According to our advisors, Smith<sup>18</sup> and others, including Leonard,<sup>19</sup> Brucato and Peng,<sup>20</sup> and Kriz,<sup>21</sup> have argued selection bias may be present when using ordinary least squares regression to estimate the impact of bond sale type on interest rates. The selection argument is (1) issuers act 'rationally' and choose the sale type (competitive or negotiated) they expect will

<sup>18</sup> Smith, Richard L. 1987. "The choice of issuance procedure and the cost of competitive and negotiated underwriting: an examination of the impact of Rule 50." *Journal of Finance*. Vol. 42, No. 3 (July): pp. 703-720.

<sup>19</sup> Leonard, Paul. 1996. "An empirical analysis of competitive and negotiated offerings of municipal bonds." *Municipal Finance Journal*. Vol. 17, No. 1 (Spring). pp. 37-67.

<sup>20</sup> Brucato, Peter and Jun Peng. 2003. "Another look at the effect of method of sale on the interest cost in the municipal bond market: A certification model," *Public Budgeting and Finance*. Vol. 23, No. 1. pp. 73-95.

<sup>21</sup> Kriz, Kenneth. 2003. "Comparative costs of negotiated versus competitive bond sales: New evidence from state general obligation bonds." *The Quarterly Review of Economics and Finance*. Vol. 43. pp. 191-211.

---

### Appendix III

#### Detailed Bond Analysis Methodology

---

achieve the lowest interest rates; (2) because issuers select the sale type in this manner, the estimates that ignore the effects of selection on interest rates are biased; and therefore, (3) correction is required to get ‘true’ impact estimates.

According to our advisors, the selection argument is based on the case that issuers choose the sale type that will achieve the lowest rate. Our advisors stated evidence suggests that reality is much more complex than the simple rational expectations model described. Other research cited by our advisors found that there are many factors which explain the choice of sale type (Simonsen and Hill,<sup>22</sup> and Robbins and Simonsen<sup>23</sup>). Thus, selection bias could occur even if expectation of interest rates is not the only basis for selection of sale type.

Therefore, according to our advisors, they have included a widely accepted method to correct for selection bias in the model. They applied the two-step estimation procedure developed by Heckman.<sup>24</sup> Kriz<sup>21</sup> also used this method in this context. According to our advisors, the inverse mills ratio requires at least one variable be included in the first stage (probit) that is not included in the second stage for identification purposes. The first stage includes a probit estimation of the probability of choosing a competitive or a negotiated sale. Our advisors used the probit results to create an inverse mills ratio for each observation, which is then included as an explanatory variable in the second regression (estimating the effects on interest rates) to control for possible selection bias. If the coefficient for the inverse mills ratio variable is not significant, it is proper to conclude there is no selection bias, according to our advisors.

The probit model used by our advisors to create the inverse mills ratio includes refunding and school purpose variables to identify the instrument. These are reasonable identifying variables. School bonds are likely to be one of the least risky general obligation bond purposes. Refunding bonds are typically sold through negotiation—the argument is that a negotiated sale is necessary to time the market to achieve maximum savings. For this reason, our advisors included the refunding status in the selection bias model. The selection bias coefficient is not significant, and therefore, the

---

<sup>22</sup> Simonsen, Bill and Hill, Larry. 1998. "Municipal bond issuance: Is there evidence of a principal-agent problem?" *Public Budgeting & Finance*. (Winter) pp. 71-100.

<sup>23</sup> Robbins, Mark and Simonsen, Bill. 2003. "Financial advisor independence and the choice of municipal bond sale type," *Municipal Finance Journal*. (Spring) pp. 37-57.

<sup>24</sup> Heckman, James. 1979. "Sample selection bias as a specification error," *Econometrica*. Vol. 47, No. 1. pp. 153-161.

---

## Appendix III

### Detailed Bond Analysis Methodology

---

refunding status, among other selection factors, does not affect the estimates.

The selection variable is not significant in any model, suggesting there is no selection bias in the Missouri general obligation bond sales data. Removing the mills variable and replacing it with refunding and school purpose variables has no appreciable effect on the estimates, according to our advisors.

---

## Fixed Effects Regression

Every location is unique, and variation across regions that is not observed and measured has the potential to result in omitted variable bias, according to our advisors. In order to avoid the bias that omitting such variables might introduce, our advisors used the fixed effect technique. This technique requires that a set of variables be included to control for any such place specific factors, according to our advisors.

According to our advisors, for the Missouri analysis, fixed effects regression was used by adding county variables. The county fixed effects model provides estimates that can be interpreted as the across-county weighted average of the effects within each county. This controls for the unobserved variation that is due to the differences between counties. It is reasonable to expect there may be differences between counties that would be controlled for using county fixed effects. These differences may include rural versus suburban versus urban governments, differences in capital needs by place, etc. In prior work, our advisors found that population size (as a measure of management capacity) has a significant and substantial effect on interest rates.<sup>25</sup>

---

## Cost Savings Estimates

In order to estimate the amount of cost savings experienced by issuers choosing competitive versus negotiated sales, our advisors constructed a bond sale based on the average characteristics in the test population of bond issues, and calculated interest costs at the average rate for negotiated sales. They repeated this analysis using the rate predicted for competitive sales.

Our advisors computed the cost savings by subtracting the interest costs for the competitive sale from the interest costs estimated for the same issue sold on a negotiated basis. The present value savings ranged from about \$21,000

---

<sup>25</sup> Robbins, Simonsen, and Helgersen. 2001. "The influence of jurisdiction size and sale type on municipal bond interest rates: An empirical analysis," *Public Administration Review*. (November/December). Vol. 61, No. 6. pp. 709-717.

### **Appendix III Detailed Bond Analysis Methodology**

---

## **Methodology Approved by Independent Professors**

---

for a \$2 million issue to \$125,000 for a \$12 million sale. The average present value savings of the test population was approximately \$78,000.<sup>26</sup>

We provided documentation of the analysis performed by our advisors to the University of Missouri Truman School of Public Affairs for an evaluation of the methodology. The Director of the Truman School of Public Affairs referred us to Judith Stallmann, Professor of Agricultural Economics, Rural Sociology and Public Affairs, and Thomas Johnson, Professor of Agricultural Economics and Public Affairs. Both professors have published research in national publications and are familiar with the statistical techniques used by our advisors.

The professors reviewed various aspects of the methodology, including the use of selection bias variables, implementation of the fixed effects model, and the impact of the small population of competitive sales. The professors concluded the selection bias estimation procedure and the fixed effects model had been properly implemented by our advisors. In addition, the professors concluded the low number of competitive sales (17) in the test population (161) did not negatively impact the results of the analysis. The professors cited the consistency of results with several models used by our advisors as additional assurance of the validity of the analysis. According to the professors, the advisors' methodology has been used in prior research and would have been peer reviewed, which adds to the validity of the analysis.

---

<sup>26</sup> Our advisors used 3.85 percent, as the discount rate for present value purposes.

# Public Entities Reviewed by SAO

Table IV.1 depicts the public entities reviewed as part of our field work. We visited the locations shown to identify potential issues faced by issuers of public debt and to understand what factors contribute to choices they make. We selected the entities from our test population of entities that completed bond issues during the 12 months ending May 31, 2005. To ensure a diverse mix of bond issuers, we based selections on geographic location, sales method, entity type and bond characteristics.

**Table IV.1: Site Visits by SAO Auditors**

<b>Bond Issued By</b>	<b>Bond Registration Number</b>	<b>Type of Sale</b>	<b>Amount of Issue</b>	<b>Date of Issue</b>	<b>True Interest Rate (Percent)</b>
Belton SD No. 124	24742	Negotiated	\$ 13,800,000	5/1/2005	4.366
Camdenton R-III SD	24701	Negotiated	18,130,000	2/15/2005	4.295
Center SD No. 58	24618	Negotiated	7,590,000	8/1/2004	4.243
City of Blue Springs	24628	Negotiated	1,110,000	8/1/2004	4.150
City of O'Fallon	24740	Competitive	16,755,000	5/5/2005	4.002
City of Northwoods	24706	Negotiated	2,100,000	3/1/2005	3.903
Clever R-V SD	24599	Negotiated	1,900,000	6/1/2004	4.814
Columbia SD	24712	Competitive	12,500,000	3/15/2005	3.728
Jefferson City SD	24620	Negotiated	4,325,000	8/1/2004	3.045
Lincoln County R-III SD (Troy)	24668	Negotiated	6,700,000	12/8/2004	3.815
Marionville R-IX SD	24606	Negotiated	720,000	6/15/2004	4.110
New Bloomfield R-III SD	24591	Negotiated	1,200,000	6/2/2004	4.774
Republic R-III SD	24612	Negotiated	3,100,000	7/1/2004	4.412
Santa Fe R-X SD	24684	Negotiated	2,100,000	12/28/2004	4.266
Wentzville R-IV SD	24597	Competitive	25,000,000	6/1/2004	4.823

Source: SAO.

In addition to the bonds listed in Table IV.1, Lincoln County R-III (Troy) issued an additional \$7,050,000 in bonds in January 2005, Camdenton R-III issued an additional \$9,330,000 in bonds in December 2004, Belton No. 124 issued an additional \$6,920,000 in bonds in February 2005, and Republic R-III issued an additional \$7,130,000 in April 2005.

# GFOA Method of Sale Matrix

**Table V.1: Competitive vs. Negotiated Sales: Summary of Conditions Favoring Each Method of Sale**

Table V.1 is a reproduction of a GFOA document intended to provide guidance to issuers of public debt. It lays out the conditions which favor both methods of sale.

	Competitive	Negotiated
<b>Debt Structure</b>		
Pledged Revenues	General Obligation or Strong System Revenue	Project Supported Revenues
Security Structure (for Revenue Bonds)	Conventional Resolution and Cash Flow; Rate Covenant and Coverage	Unusual or Weak Covenants; Subordinated Debt
Debt Instrument	Traditional Serial and Term, Full Coupon Bonds	Use of Innovative Structuring, Derivative Products, Structure to Attract Particular Investors (e.g. Discount Bonds), etc.
<b>Credit Quality</b>		
Rating	'A' or better	Below Single 'A'
Outlook	Stable	Weak but Improving, or Under Stress
<b>Issuer Characteristics</b>		
Type of Organization	Broad-Based General Purpose Borrower	Special Purpose, Independent Authority
Frequency of Issuance	Regular Borrower in Public Market	New or Infrequent Issuer
Market Awareness	Active Secondary Market with Broad Investor Base	Little or No Institutional Awareness of Issuer; Historical Antipathy
Investor Comfort	Well-Known, Stable Issuer	Issuer Experiencing Significant Financial, Legal or Other Problems
<b>Market Conditions</b>		
Interest Rates	Stable; Predictable Market	Volatile or Declining Market
Supply and Demand	Strong Investor Demand, Good Liquidity, Light Forward Calendar	Oversold Market, Heavy Supply
<b>Policy Considerations</b>		
Participation in Sale of Bonds	Broad Market Participation Desired Sale of Bonds	Desire to Direct Business to DBE <sup>1</sup> or Local/Regional Firms
Stimulation of Investor Interest	Broad Market Participation Desired for Purchase of Bonds	Desire to Direct Business to Local/Regional Investors

<sup>1</sup> Disadvantaged Business Enterprise

Source: A Practitioner's Guide to Effective Debt Management: Competitive v. Negotiated How to Choose the Method of Sale for Tax-Exempt Bonds, GFOA, page 14. Reproduced with permission.